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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/593,982	09/25/2006	Monica Cotlear De Witzmann	3863	3402

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EXAMINER	
HOBAN, MATTHEW E	
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/593,982	COTLEAR DE WITZMANN ET AL.	
	Examiner	Art Unit	
	Matthew E. Hoban	1793	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *01 December 2008*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *13,15-18 and 20-25* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *13, 15-18, 20-25* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 12/1/2008 has been entered.

Claim Rejections - 35 USC § 103

1. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

2. Claims 13, 20-22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Cotlear de Witzmann in 6,794,020 in view of Clough in 6562461.

Cotlear de Witzmann teaches a glass composition with similar (**exactly the same)** ranges of composition as the instantly claimed ranges as in claim 19 (See column 7).This composition further contains pigments such as $ZrSiO_4$, TiO_2, CaO_2, ceramic yellow pigments, such as Zr/Sr/Pr oxides and brown pigments, such as Zn/Cr/Pr oxides among other conventional pigments, and other minor constituents (Relevant to Claim 20; Column 7, lines 20-24). This composition is intended to be used on a cooking surface and would thus undergoe high thermal loads, which would be similar to those

experienced by the current invention. Finally as stated by 6,794,020, this composition can be used for decorative purposes on a cooking surface, where cooking zone markings, marking for operating elements, and company logos can be applied according to the desire of the customer. Furthermore, this process is performed by screen printing (Relevant to claims 21 22; See Column 9, lines 6-20).

Cotlear de Witzmann does not teach the use of oxide coated silica pearlescent pigments.

Clough teaches pigments consisting of a silica platelet and a titanium dioxide layer in Examples 9 and 10. These pigments are 50 microns in size and have color-flop effects (pearlescent). Clough teaches the suitable applications for such a particle where a substrate is coated with a metal oxide include the inclusion of such a particle in heating elements (See Column 23, Lines 65-70).

The pigments of Clough are directly importable into the glaze of Cotlear de Witzman, due to the fact that Clough's pigments are said to be useful in glazes for glasses and ceramics. These pigments could be used in the same amounts as the conventional pigments of Cotlear de Witzmann, which is around 12.5 wt% (See Example). Cotlear de Witzman requires the pigment only to be stable at the melt temperature. Clough

clearly states that his pigments can see use in heating elements, where high temperatures are typical. Thus one of ordinary skill would find that these pigments could be suitably incorporated in the glaze. Furthermore, one of ordinary skill would realize that by adding the pigments of Clough, they could create a glaze with different coloration, while also adding a pearlescent effect to the glaze as well. These different aesthetic properties would motivate one of ordinary skill, since the art of glazing deals heavily with aesthetics. Coloration is a major aspect of aesthetics. If one desired a color-flop effect, his options would be limited. Therefore, one would chose from a very finite number of pigments to create the desired aesthetic effect. The motivation to combine is thus to create such a desired aesthetic effect.

1. Claims 15 and 17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Cotlear de Witzmann in 6,794,020 in view of Clough in 6562461 as applied to claim 13, and further in view of Merck in "Colorstream T20-03 WNT Tropic Sunrise Product Information".

Cotlear de Witzmann in view of Clough disclose a glazing composition incorporating platelet shaped (plane parallel) silicon dioxide platelets coated with titanium dioxide. These pigments are color-flop or pearlescent pigments. The composition is based on a silicate frit so is able to undergo large thermal loads. The composition is then used to decorate a tile using a screen printing technique (See Column 9, lines 6-20). The glaze, which comprises a frit and colorant, is considered a

melt upon subsequent firing. The thus fired glaze created a decorated glass ceramic or glass article.

Cotlear de Witzmann in view of Clough do not teach the specific properties of the titanium dioxide coated silicon dioxide platelets as delineated in claims 15 and 17.

However, Merck teaches inorganic oxide pigments, which fall under the class of pigments as disclosed by Clough.

Regarding claims 15: This specific pigment is based on synthetically manufactured silicon dioxide platelets coated with titanium dioxide, where their particle size ranges from 5-40 microns and more than 80% of the particles are within this limit (See Technical Data). Furthermore, the particles exist as a free flowing powder

Regarding claim 17: The pigment as disclosed by Merck has a composition of particle size where d10 is 8.7, d50 is 19.3, and d90 is 37.1 (See Technical data).

The pigments created by Merck are a species of the particles as made by Clough. Once again Clough teaches a silica core. This silicon dioxide is coated with various metal oxide of high and/or low refractive index. Clough teaches Titanium Oxide, but other oxides such as tin dioxide are listed as possible coatings (See Column 9, Lines 40-50). As mentioned previously, the metal oxides of Clough are mentioned as

being useful in heating elements, where a range top is clearly a heating element. Since the pigments of Merck are a species of the pigments of Clough, one of ordinary skill in the art would determine that these species would be useful in the same application as their genus. In other words, Clough describes oxide coated silica, where the composition can include the oxides found in the Merck pigment. Therefore, one of ordinary skill in the art would find that since Clough's pigments are useful in glazes, as would Merck's be. Therefore one of ordinary skill would have a reasonable expectation that incorporation of the Merck pigments into the composition of Cotlear de Witzmann would successfully impart a coloring effect. Furthermore, one of ordinary skill would realize that by adding the pigments of Merck, they could create a glaze with different coloration, while retaining a pearlescent effect. One of ordinary skill would not expect a pigment of the same structure to have differing properties. Therefore, the fact that the Merck pigments do not dissolve in a glass melt would not be surprising based on the fact that Clough teaches their usefulness in such applications.

These different aesthetic properties would motivate one of ordinary skill, since the art of glazing deals heavily with aesthetics. Coloration is a major aspect of aesthetics. If one of ordinary skill desired to make a glaze with the coloration characteristics similar to those found in Table 2, his options would be limited. If one further desired a color-flop effect, his options would be further limited. Therefore, one would chose from a very finite number of pigments to create the desired aesthetic effect.

2. Claims 15, 16, and 18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Cotlear de Witzmann in 6,794,020 in view of Clough in 6562461 as applied to claim 13-14 above, and further in view of Merck in "Colorstream T20-02 WNT Arctic Fire Product Information".

Cotlear de Witzmann in view of Clough discloses a glazing composition incorporating platelet shaped (plane parallel) silicon dioxide platelets coated with titanium dioxide. These pigments are color-flop or pearlescent pigments. The composition is based on a silicate frit so is able to undergo large thermal loads. The composition is then used to decorate a tile using a screen printing technique (See Column 9, lines 6-20). The glaze, which comprises a frit and colorant, is considered a melt upon subsequent firing. The thus fired glaze created a decorated glass ceramic or glass article.

Cotlear de Witzmann in view of Clough does not teach the specific properties of the titanium dioxide coated silicon dioxide platelets as delineated in claims 15 and 17.

However, Merck teaches inorganic oxide pigments, which fall under the class of pigments as disclosed by Clough.

Regarding claims 15 and 18: This specific pigment is based on synthetically manufactured silicon dioxide platelets coated with titanium dioxide, where their particle size ranges from 5-40 microns and more than 80% of the particles are within this limit (See Figure 4). Furthermore, the particles exist as a free flowing powder

Regarding claim 16 and 18: The pigment as disclosed by Merck has a composition of 59 wt% silicon dioxide, 36.7 wt% titanium dioxide, 2.7 wt% tin dioxide, and 1.6 wt% zirconium dioxide.

The pigments created by Merck are a species of the particles as made by Clough. Once again Clough teaches a silicon based oxide as a core, which can be silicon dioxide. This silicon dioxide is coated with another metal oxide of high refractive index. Clough includes Titanium Oxide, but other oxides such as tin dioxide in his list of possible coatings (See Column 9, Lines 40-50). As mentioned previously, the metal oxides of Clough are disclosed as being useful in heating elements, where a range is clearly a heating element. Since the pigments of Merck are a species of the pigments of Clough, one of ordinary skill in the art would determine that these species would be useful in the same application as their genus. In other words, Clough describes oxide coated silica, where the composition can include all of the oxides found in the Merck pigment. Therefore, one of ordinary skill in the art would find that since Clough's pigments are useful in glazes, as would Merck's be. Therefore one of ordinary skill would have a reasonable expectation that incorporation of the Merck pigments into the

composition of Cotlear de Witzmann would successfully impart a coloring effect. Furthermore, one of ordinary skill would realize that by adding the pigments of Merck, they could create a glaze with different coloration, while retaining a pearlescent effect. One of ordinary skill would not expect a pigment of the same structure to have differing properties. Therefore, the fact that the Merck pigments do not dissolve in a glass melt would not be surprising based on the fact that Clough teaches their usefulness in such applications.

These different aesthetic properties would motivate one of ordinary skill, since the art of glazing deals heavily with aesthetics. Coloration is a major aspect of aesthetics. If one of ordinary skill desired to make a glaze with the coloration characteristics similar to those found in Table 2, his options would be limited. If one further desired a color-flop effect, his options would be further limited. Therefore, one would chose from a very finite number of pigments to create the desired aesthetic effect.

3. Claims 23-25 are rejected under 35 U.S.C. 103(a) as being unpatentable over Cotlear de Witzmann in 6,794,020 in view of Clough in 6562461 and further in view of Merck in "Colorstream T20-02 WNT Arctic Fire Product Information".

Cotlear de Witzmann teaches a glass composition with similar (**exactly the same)** ranges of composition as the instantly claimed ranges as in claim 19 (See column

7).This composition further contains pigments such as $ZrSiO_4$, TiO_2, CaO_2, ceramic yellow pigments, such as Zr/Sr/Pr oxides and brown pigments, such as Zn/Cr/Pr oxides among other conventional pigments, and other minor constituents (Relevant to Claim 20; Column 7, lines 20-24). This composition is intended to be used on a cooking surface so it obviously undergoes high thermal loads, which are inherently the same as those experienced by the current invention. Finally as stated by 6,794,020, this composition can be used for decorative purposes on a cooking surface, where cooking zone markings, marking for operating elements, and company logos can be applied according to the desire of the customer. Furthermore, this process is performed by screen printing (Relevant to claims 21 22; See Column 9, lines 6-20).

Cotlear de Witzmann does not teach the use of oxide coated silica pearlescent pigments.

Clough teaches pigments consisting of a silica platelet and a titanium dioxide layer in Examples 9 and 10. These pigments are 50 microns in size and have color-flop effects (pearlescent). Clough teaches the suitable applications for such a particle where a substrate is coated with a metal oxide include the inclusion of such a particle in heating elements (See Column 23, Lines 65-70).

The pigments of Clough are directly importable into the glaze of Cotlear de Witzman, due to the fact that Clough's pigments are said to be useful in glazes for glasses and ceramics. These pigments could be used in the same amounts as the conventional pigments of Cotlear de Witzmann, which is around 12.5 wt% (See Example). Cotlear de Witzman requires the pigment only to be stable at the melt temperature. Clough clearly states that his pigments can see use in heating elements, where high temperatures are typical. Thus one of ordinary skill would find that these pigments could be suitably incorporated in the glaze. Furthermore, one of ordinary skill would realize that by adding the pigments of Clough, they could create a glaze with different coloration, while also adding a pearlescent effect to the glaze as well. These different aesthetic properties would motivate one of ordinary skill, since the art of glazing deals heavily with aesthetics. Coloration is a major aspect of aesthetics. If one desired a color-flop effect, his options would be limited. Therefore, one would chose from a very finite number of pigments to create the desired aesthetic effect. The motivation to combine is thus to create such a desired aesthetic effect.

Cotlear de Witzmann in view of Clough does not teach the specific properties of the titanium dioxide coated silicon dioxide platelets as delineated in claims 15 and 17.

However, Merck teaches inorganic oxide pigments, which fall under the class of pigments as disclosed by Clough.

Regarding claims 23-25: This specific pigment is based on synthetically manufactured silicon dioxide platelets coated with titanium dioxide, where their particle size ranges from 5-40 microns and more than 80% of the particles are within this limit (See Figure 4). The particle size distribution is give in Figure 4, where d10 is 8.1 microns, d50 is 18.4 microns and d90 is 36.2 microns. Furthermore, the particles exist as a free flowing powder

Regarding claim 23 and 25: The pigment as disclosed by Merck has a composition of 59 wt% silicon dioxide, 36.7 wt% titanium dioxide, 2.7 wt% tin dioxide, and 1.6 wt% zirconium dioxide.

The pigments created by Merck are a species of the particles as made by Clough. Once again Clough teaches a silicon based oxide as a core, which can be silicon dioxide. This silicon dioxide is coated with another metal oxide of high refractive index. Clough includes Titanium Oxide, but other oxides such as tin dioxide in his list of possible coatings (See Column 9, Lines 40-50). As mentioned previously, the metal oxides of Clough are disclosed as being useful in heating elements, where a range is clearly a heating element. Since the pigments of Merck are a species of the pigments of Clough, one of ordinary skill in the art would determine that these species would be useful in the same application as their genus. In other words, Clough describes oxide coated silica, where the composition can include all of the oxides found in the Merck

pigment. Therefore, one of ordinary skill in the art would find that since Clough's pigments are useful in glazes, as would Merck's be. Therefore one of ordinary skill would have a reasonable expectation that incorporation of the Merck pigments into the composition of Cotlear de Witzmann would successfully impart a coloring effect. Furthermore, one of ordinary skill would realize that by adding the pigments of Merck, they could create a glaze with different coloration, while retaining a pearlescent effect. One of ordinary skill would not expect a pigment of the same structure to have differing properties. Therefore, the fact that the Merck pigments do not dissolve in a glass melt would not be surprising based on the fact that Clough teaches their usefulness in such applications.

These different aesthetic properties would motivate one of ordinary skill, since the art of glazing deals heavily with aesthetics. Coloration is a major aspect of aesthetics. If one of ordinary skill desired to make a glaze with the coloration characteristics similar to those found in Table 2, his options would be limited. If one further desired a color-flop effect, his options would be further limited. Therefore, one would chose from a very finite number of pigments to create the desired aesthetic effect.

Response to Arguments

4. Applicant's arguments with respect to claims 13-25 have been considered but are moot in view of the new ground(s) of rejection.

Although a new rejection is made, comments concerning the similarities and differences of Coulter and Clough will be discussed. For this purpose, the arguments beginning on page 15 will be discussed, as Eppler is now seen as wholly irrelevant to the claims, as all claims are now directed towards a specific glass composition as seen in claim 13. Previously a reference to Coulter was used to reject the claims. It is noted that the new amendments to the claim overcome Coulter based on the fact that Coulter included multilayers and the particles did not consist of silica platelets and a single layer of coating including titania. Therefore, all arguments based on the deficiencies of Coulter are ameliorated by Clough, which is used in the same regards but reads on the currently amended claims.

Now section 3 of the arguments will be discussed which is based on the combination of references. Applicant asserts that the pigments as taught by Merck wouldn't achieve the goal of Cotlear de Witzmann. This assertion is unconvincing as de Witzmann appreciates the use of other pigments which are stable at the necessary temperature and also appreciates the freedom of choice of those making such a panel (see column 8, 2nd full paragraph). Therefore, the choice of any pigments giving a desired effect to the designer are suitable and

the selection of known pigments that give such an effect is an obvious modification. Cotlear de Witzmann does not require all pigments be expressly for concealment of such marks, and as stated appreciated the flexibility and demands of the designer to create certain effects. Therefore, applicant's arguments in this regard are unconvincing. Furthermore, the combination of references does not intend to substitute ALL of the pigments of Cotlear de Witzmann but only a portion of them. Therefore, the purpose of the reference is maintained and new effects based on pearlescent pigments can be incorporated. Applicant then brings up Baird case law. The present situation is unlike Baird in that the species compounds do not teach away from the combination. There is nothing of reference stating that such compounds would actually increase the detectability of marks on a surface. Furthermore, Cotlear de Witzmann's disclosure allows for the incorporation of other known pigments. Applicant's state that mica flakes make marks more conspicuous due to high reflection on page 2; however, Clough is directed towards silica platelets and not mica flakes.

Applicants go on to arguments concerning Coulter, which is no longer made of reference. However, the assertions that it must be EXPLICITLY shown that a composition is capable of being used in a certain application is unconvincing. The mere suggestion of its use in an application would motivate one of ordinary skill in the art to combine such items and would give them a reasonable expectation of success in this endeavour.

5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Matthew E. Hoban whose telephone number is (571) 270-3585. The examiner can normally be reached on Monday - Friday from 7:30 AM to 5 PM EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jerry Lorengo can be reached on (571) 272-1233. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/J.A. LORENGO/
Supervisory Patent Examiner, Art Unit 1793

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